

## Group Project Guidelines

### Objectives

1. Increase student awareness and capacity in identifying problems related to global sustainability and food security.
2. Students learn to identify potential solutions or models for improving some aspect of global sustainability and/or food security.
3. Students develop greater inter-cultural collaboration and communications skills
4. Students develop greater appreciation and acceptance of differing global perspectives on sustainability and food security issues and causes.

Working together will challenge students to understand and accept the validity of differing perspectives and opinions about sustainability and food security issues and concerns. Groups are encouraged to share these perspectives freely without fear of judgement but to ultimately focus their discussions on common values and goals.

Student groups are expected to conduct independent research for data and information related to an approved topic of their choice related sustainability and/or food security. The problem addressed does not need to span the spectrum of development from under developed to developed economies but students should address how the problem and its solution impact the global perspective.

### Format

Students will be given two broad options for the form of their final project report. All teams will be expected to formally report before instructors and peers on XXX. All reports should include data that illustrates the problem and supports the importance of the problem being addressed. Solutions should be based in accepted theory or data based analyses and not rest solely on the opinions of team members.

#### *Format 1*

Students will develop a traditional written report generally using the outline presented later in this document. In addition, students will develop either a storyboard or PowerPoint slides based on their report and use said in an in-person presentation on XXX. The presentation should last no longer than 20 minutes and will be followed by a questions and answers session of approximately 15 minutes.

#### *Format 2*

Students will develop a traditional written report generally using the outline presented later in this document. In addition, students will produce a well-edited video presentation related to the topic that includes original video or photography emphasizing the problem and/or the proposed solution. The video will be presented on XXX. The video presentation should last no longer than 15 minutes and will be followed by a questions and answers session of approximately 15 minutes.

#### *Format 3*

Instructors are open to other innovative methods of presentation and project design but these require prior approval.

### **Identifying a Relevant Topic**

Your topic should have importance to issues related to local or global food security and/or sustainability. Topic that are very broad in scope such as “Global Water Quality” are difficult to address in general but particularly within the compressed time span of this course. Thus, it is important that your group focus the topic on a specific location and/or key aspect of the topic. If your group is concerned about water quality, for example, then perhaps narrowing the scope to the Cafetero Region of Colombia and Soil Erosion impact on water quality is a more manageable project. The key is to focus on a manageable problem that can be researched in a short period of time.

### **Report Outline**

*Introduction* (Background information and support data of the current situation and outlook as well as text that motivates the importance of the problem being addressed. Key stakeholders should also be identified in this section [Who is impacted by this problem? Who might take action? Who else might unintentionally benefit or be harmed from a solution?]) This section should close with a succinct statement of the problem.)

*Current Knowledge* (This section should focus on cause and effect drawing from the knowledge and writing of experts in the field. It should in some way address the questions: What do we know? What do we still need to know? What solutions have been tried and how well have they worked? The section should end with an actions needs statement.)

*Proposed Solution* (This section carefully describe the functional and technical aspects of a proposed solution to the above defined issues carefully taking into account the problem statement, the stakeholders, and the current state of knowledge. The logic between the proposed solution and the desired outcome must be clearly stated and supported. A question that commonly arises is “Does a proposed solution or technology need to be in existence before it can be proposed in the project?” The answer is no – teams may/are encouraged to imagine new technologies or approaches, however, these must be based on accepted and documented scientific principles. For example, speed of light space ships that allow man to travel to new resource rich planets is not an acceptable solution because the science to support such technology does not currently exist. Political difficulties should not impede the development of proposed solutions, but including information about the challenges of instituting policies in a particular scenario is important to document as a part of the proposal. In general, this portion of your report should include a short discussion of potential impediments to implementing the proposed solution.

### **Key Mileposts**

#### *Identification and Approval of Project Topic*

Groups will turn in a draft of their project introduction with problem statement by the afternoon of XXX

#### *Progress Report*

Groups will submit a progress report on XXX

### *Final Report*

All written reports, videos, story boards, and/or powerpoint slides must be turned in by 8:30 AM before presentation sessions begin on XXX

### *Presentations*

All presentations will take place on XXX

### **Grading**

Written reports will be graded on clarity of presentation, logic of arguments and statement of the problem, feasibility of the proposed solution, and development of key information to support the importance of the problem and the key aspects of the proposed solution. Presentations will be graded on contributions by all team members, clarity and professionalism of presentation, ability to effectively address audience questions, participation in asking questions of other groups, and time management.

### **Example Topics**

The topic below are purposely broad. Student teams should narrow the topic down to a specific issue or situation for analysis and solution. The narrowing could/should include both the scope of the problem as well as the geography. For example, it is unlikely there is a single feasible solution to global water quality concerns but there might be a solution of interest in a specific context such as the Colombia paramo or rivers and streams of Indiana. If a single solution to both arises this would be interesting to explore, of course. The list below is meant to serve as an example of how to begin identifying a problem for project analysis. It is not a complete list of potential projects that could be of interest in this course.

*The Role of International Trade in Food Security and/or Global Sustainability*

*Population/Demographics/Population Distribution and Food Security and/or Sustainability*

*Income Inequality and Food Security and/or Sustainability*

*Access to Technology or Other Key Resources for Development*

*Water Quality management and Food Security and/or Sustainability*

*Water Quantity and Distribution and Food Security and/or Sustainability*

*Agricultural Productivity and Sustainability and/or Food Security Tradeoffs or Challenges*

*Land Use Options or Policies related to Sustainability and/or Food Security*

*Environmental Management and Preservation and Food Security*

*Agricultural Systems' Roles in Sustainability and/or Food Security*

*Food Waste and/or Food Loss*

*Public Policy and/or Economic Markets Related to Sustainability and/or Food Security*

*Product Labelling and Sustainability/Food Security*

*Inequity in Quantity vs. Quality of Food and Access to Food*

*Climate Change Adaptation and Communication for Sustainability and/or Food Security*

*Management or Policy for a Public Good Related to Sustainability and/or Food Security*

*Ecosystem Services and agriculture*

*Circular economy in agriculture*